

Koch, Kristine

From: Sheldrake, Sean
Sent: Monday, October 27, 2014 9:45 AM
To: Koch, Kristine; GAINER Tom
Cc: MCCLINCY Matt; Genevieve Angle - NOAA-NMFS (Genevieve.Angle@noaa.gov); Coffey, Scott
Subject: RE: FS shallow capping criteria

Thanks Kristine.

Tom, Thanks for your comments. We'll take a look at your comment and get back to you on whether this changes any of our thinking, though we'll also be interested in hearing the NMFS perspective on this (cc'ing Genevieve for this reason). While most of the time seems reasonable, certain time periods will likely be of greater concern to EPA and NMFS when looking closely at certain ESA listed species. We agree that this is likely not an EO flooding concern, but we do have to keep that under evaluation as well.

S

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From: Koch, Kristine
Sent: Monday, October 27, 2014 9:41 AM
To: GAINER Tom; Sheldrake, Sean
Cc: MCCLINCY Matt
Subject: RE: FS shallow capping criteria

Tom – As EPA provided in a meeting with the LWG on June 5, here is our response:

RESPONSE: The intent of using the “shallow” criterion was so that a placed 3-ft cap would not be exposed during low flows. The underlying rationale is that remedial actions should not create adverse conditions for aquatic organisms by converting submerged habitat to intertidal or exposed habitat. LWG states that higher elevations would “not present unique habitat or flooding issues as compared to other shoreline elevations”, but they would clearly alter the distribution of shallow water habitat, creating higher elevations that remain above the water surface at a greater range of flows and time. It should also be noted that at the McCormick and Baxter site, according to ODEQ, “...a major component of the sediment cap design was the elevation where waves were assumed to have minimal impact on the sediment cap. This was generally referred to as the break between deep and shallow water. This elevation is -7 ft CRD (-5.26 NGVD ...)” Even though a cap was placed in the nearshore zone, it required special design considerations for stability.

Notwithstanding the above, CDM Smith revisited the selection of the shallow criteria using the available NOAA datums and USGS gage records for the Morrison Street gage station. Based on the MLLW datum of 1.65 ft CRD (7.03 ft NAVD88) the shallow criterion was revised and set at an elevation of 4 ft NAVD88 to allow for a 3-ft cap to be constructed that maintains submergence at the MLLW.

While there may be opportunities to construct caps above the 4 ft NAVD88 elevation, they would likely require special design considerations and are best addressed as part of a site-specific analysis, rather than as part of the technology assignment scoring framework.

As Sean stated, let us know if you want to discuss this further and we'll set up some time with you.

Kristine Koch
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From: GAINER Tom [<mailto:GAINER.Tom@deg.state.or.us>]
Sent: Monday, October 27, 2014 9:28 AM
To: Sheldrake, Sean; Koch, Kristine
Cc: MCCLINCY Matt
Subject: RE: FS shallow capping criteria

Thanks Kristine and Sean for this information. I understand the intent of this approach, but for the technology screening approach was wondering if EPA is considering adjusting the definition (i.e., elevation) of "shallow" based on the LWGs 4/30/14 memo:

- Shallow –
 - EPA defines shallow areas as less than 1 meter below Ordinary Low Water (OLW), which is 2 ft NAVD88. The mean high water mark for the river is 20 ft NAVD88 and the upper elevation of the Study Area sediments, as defined by EPA, is 13.3 ft NAVD88. Thus, new caps placed within EPA's defined shallow zone would stay submerged over the large majority of river flow conditions (i.e., and therefore not comprise or be defined as "new uplands"). Also, as discussed in the April 24th meeting, capping within this zone does not present unique habitat or flooding issues as compared to other shoreline elevations.
 - We suggest that EPA use a water level that is aligned with the Study Area upper sediment boundary of 13.3 ft NAVD88. Using EPA's definition of areas 1 meter below a defined water elevation, we would suggest a definition for shallow areas as that portion of the Study Area between 13.3 ft and 10 ft NAVD88.

Thanks-
Tom

From: Sheldrake, Sean [<mailto:sheldrake.sean@epa.gov>]
Sent: Friday, October 24, 2014 12:22 PM
To: Koch, Kristine
Cc: GAINER Tom; MCCLINCY Matt
Subject: Re: FS shallow capping criteria

Thanks Kristine that's absolutely correct.

Tom, we are getting a flood rise framework ready for TCT and state review and on another note I would be interested in talking with DeQ about this at length if you are interested but that is also a consideration in some cases. Most cases there won't be any impact to flood rise or flood storage unless the cap is deeper in the channel, so mitigation aspects will likely be a driver off channel.

I have some time before I get on my 12 hours of flight back to Seattle if anyone would like to call to discuss further.

See you guys next week.

S

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On Oct 24, 2014, at 2:10 PM, "Koch, Kristine" <Koch.Kristine@epa.gov> wrote:

Tom – The shallow capping rules are to prevent areas that are currently under water (aquatic habitat) from becoming above water during lower river stages. This may also have an effect on flood storage. EPA is not saying that capping cannot be conducted in these areas, but that elevation changes should not be allowed so that mitigation costs are not necessary. Therefore, if you want to place a 3' thick cap, you would have to remove 3' of sediments first. If you didn't want to follow this rule, then there would be mitigation costs that would need to be considered which can get quite expensive. We plan to evaluate this tradeoff in the FS.

Let me know if you have further questions on this.

Sean – please weigh-in if you have further thoughts.

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From: GAINER Tom [<mailto:GAINER.Tom@deq.state.or.us>]
Sent: Tuesday, October 21, 2014 10:31 AM

To: Koch, Kristine

Subject: FS shallow capping criteria

Kristine-

Around April EPA presented criteria for shallow capping to avoid the creation of “new land” during low water conditions. The LWG subsequently submitted a memo suggesting an alternative maximum sediment elevation where capping could be considered. What is EPA’s current position on this topic- that is, did you or are you considering an alternative elevation above which caps will not be assigned in the revised FS?

Thanks-

Tom Gainer, P.E.

Project Manager/Environmental Engineer

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